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2^d. Essay by order of
the Faculty.

An

Inaugural Essay

on

Cholera Infantum

by

William Johnson

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Delaware

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On Cholera Infantum.

By Cholera Infantum we mean a disease, accompanied by vomiting & purging, which generally prevails in our large towns, and cities, in the months of June, July, August, and sometimes in September. The subjects of this disease, as the name imports, are infants, generally those from one month, to two and even three years old.

As it occurs in the summer months, it has been denominated the Summer complaint. It has received several other appellations, such as the bowel complaint, the complaint of the season, and the vomiting

and purging of Children.

It frequently commences with a diarrhoea; which sometimes continues for two or three days, with very little general disorder of the system, except some degree of emaciation, resulting from the frequent alvine discharges.

The child's indisposition is generally ascribed, by the mother or nurse, to worms; or, if it be about the usual period of dentition, it is commonly attributed to this cause.

The attack, however, more frequently commences with a violent vomiting and purging, alternately, or together, accompanied with more or less fever. The discharges from the stomach and bowels, particularly from the latter, are generally green or of a dark yellow colour, sometimes thin, and of a watery appearance, at other times of a mixed curdy nature, containing dark greenish streaks.

When the disjections are thin and watery, they are generally pretty

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frequent and large in quantity, with little or no appearance of bile intermixed. Sometimes the evacuations from the bowels are of a slimy or mucous nature.

Worms are occasionally discharged at an advanced period of this disease, but more generally about the middle stage, hence it has been frequently ascribed to worms.

Cholera infantum is mostly accompanied by a fever of the remitting type; and, in many cases, the remission can be distinctly observed, with evident exacerbations in the evening.

The pulse in this disease is weak and quick, and generally soft.

There is often a preternatural warmth of the head, with an unusual coldness of the extremities. That the head is considerably affected in this disease, is evident from the constant turning, tossing and throwing the head backwards, and attempting to scratch the nurse; in some instances, there is even

delirium.

Children in the early stage of the disease appear to suffer considerable pain, as is indicated by more or less restlessness, drawing up the legs, and twisting or turning of the body, with other symptoms of great uneasiness.

The eyes appear dull, heavy, and sunken; the countenance is pale and inanIMATE; the features diminished or contracted.

In this stage of the disease, the child sleeps with the eyes more or less open; sometimes not more than half closed. And so insensible is the system, at this period, that the flies, which alight upon the eye-lids, do not excite any motion of the eye for their removal.

There is considerable thirst throughout the whole course of the disease, which increases as the disease advances. The desire for cold water continues uninterrupted, although the stomach

rejects it, in a few minutes after it is taken.

The preceding symptoms, unless arrested by our remedial agents, go on increasing in violence. The evacuations become more frequent, and offensive, or more copious and unnatural; until at last the substances, taken into the stomach, pass through the intestines, with little or no alteration. In this state of things, unless speedy relief be afforded by our remedies, or a favourable change be produced by a removal into the country, symptoms of a more fatal character soon supervene.

We now have an apathetic state of the mouth, distention of the abdomen, livid skin, extreme emaciation, coma, eyelids half open, with the eye turned upwards, a Typhoid countenance, and sometimes convulsions. When these symptoms make their appearance, death soon relieves the little sufferer.

When the attack is very vehement, it sometimes proves fatal in twenty



four hours; though the patient frequently lingers for weeks.

Cholera Infantum is principally if not entirely, a disease of warm & hot climates, and prevails only during the summer months.

The frequency and violence of the disease, as has been observed by Dr. Rush, appear to be in proportion to the degree and continuance of the summer heat; and it subsides, on the appearance of cold weather. From the above fact it would seem that heat has a prominent agency in the production of the disease. It is chiefly, if not entirely, confined to large towns and crowded cities; and is more prevalent and fatal, among the poor who inhabit close, narrow, & filthy alleys.

That Cholera Infantum is a variety of Bilious Fever, inverted, or determined to the intestines, is an assertion which I shall not attempt to controvert. Nor will I deny that



the vitiated or miasmatic state of the air, in the large cities, is of the same nature as that producing Bilious Fever, as mentioned by writers on the subject, particularly by Dr. F. Cordie. I would barely observe, that in many low marshy situations, where Intermittent, Remittent, and Bilious Fevers prevail to a very great extent, Cholera Infantum is scarcely known.

That dentition alone cannot generate Cholera Infantum, although when formed it may greatly aggravate all of the symptoms, is sufficiently evident. For were it the case, we should not have the disease only appearing in particular months; it should occur as often in the winter, as during the summer, since dentition is going on at all seasons. But where a predisposition to the disease has been previously established, it may readily be excited by this process.

It has also been attributed to the



presence of worms in the alimentary canal. But as it sometimes occurs when there is not the slightest evidence of the existence of worms; and as they are often present without occasioning any symptoms of this disease; we may fairly infer, that they are not a common cause of Cholera. Indeed as Dr. Rush justly observes, it is difficult to conceive how worms can combine in such a manner as to produce an epidemic disease. Still, however, I am far from denying that worms may aggravate, or even excite, the disease, where there exists a predisposition. Such I believe to be the fact. But a greater agency, in the production of Cholera, than this, I am fully persuaded they do not exercise.

Our ordinary summer fruits, especially when unripe, prove an exciting cause of the disease. But could they produce it without the co-operation of any auxiliary means, then the



disease would be more prevalent in the country, where the consumption of fruit is greater, than in cities. The reverse of this, however, obtains; for in the country, it is comparatively a rare disease.

From a due consideration of all the circumstances connected with Cholera Infantum, it would appear, that the great heat of our summer months, and a vitiated state of the atmosphere are the main, if not the only causes, that give rise to this disease. I shall not attempt to explain the manner, in which the heated and impure atmosphere of our cities, operates on the system of infants, to produce so irritative a condition of the alimentary canal.

I shall now proceed to point out what appears to me the best course to be pursued, in the management of Cholera Infantum.

Called in the commencement of the disease, we should resort to an

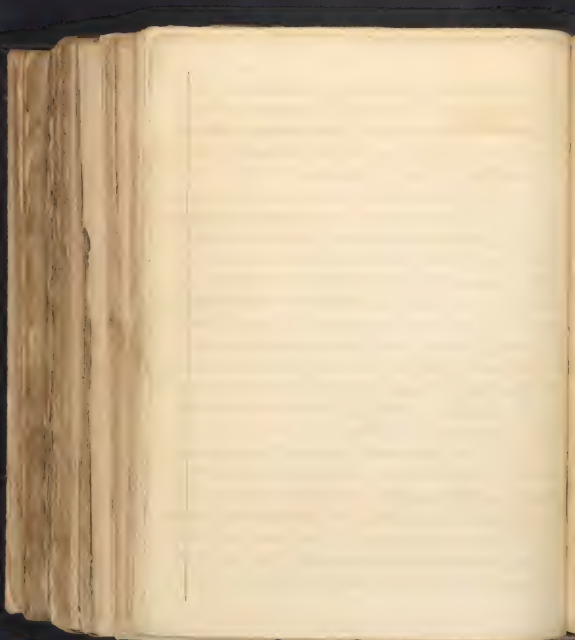


active emetic, either of Ipecacuanha or tartarized antimony. This remedy determines to the surface, cleanses out the stomach, and prepares it for the reception & operation of other articles.

It should be succeeded by a mercurial purgative. By the early exhibition of an emetic followed up by a cathartic of calomel, we remove, more certainly and speedily, the vitiated contents of the primæ viæ, institute a new action in the alimentary canal, and in some instances arrest the disease at once.

Should these means fail in checking the progress or violence of the disease, we are to resort to other remedies calculated to accomplish this object.

The stomach being the medium through which impressions are mostly made on the system, no little difficulty is experienced, when it becomes morbidly irritable, & refuses to retain our medicines. Gastric irritability is one of the characteristic features of Cholera Infantum.



To allay this condition of the stomach, various remedies have been proposed, the most ~~effective~~ are anodyne injections, the warm bath, & fomentations.

If there be much febrile action, with a vigorous pulse, a good deal of benefit, in some instances, will be experienced from the use of the lancet. This remedy, however, must not be rashly resorted to; much injury would inevitably ensue from its indiscriminate use. Still where the symptoms call for venesection, & it is not contraindicated by the state of the system, considerable relief will be afforded by it.

But probably the most important remedy in the disease, after the stomach and bowels have been completely cleansed, is small & repeated doses of calomel. By persevering in the use of this article, the gastric irritability is allayed, the liver is excited to the performance of its healthy functions, and the frequency & quality of the



of the discharges are altered. So soon as the stools assume a bright yellow colour, indicative of the action of the calomel on the liver, convalescence, speedily takes place.

It sometimes happens, that the discharges are so frequent & copious as to occasion prostration to an alarming extent. Under these circumstances, small portions of opium & ipecacuanha should be combined with the calomel. This combination by determining to the surface, and inducing perspiration, is frequently productive of much permanent advantage. At any rate by checking the disease, it gives time to the calomel to exert its alterative effect on the system. Though it generally does more than palliate.

Blisters applied over the region of the stomach & to the extremities are often very serviceable. By the strong counter impression which they make on the system, they invite the



disease to the surface, & thereby equalize the excitement & relieve the internal parts.

We have already mentioned the warm bath as a remedy well suited to calm the irritability of the stomach; besides this, it determines to the surface promotes diaphoresis & checks the frequency of the alvine discharges. The efficacy of the bath is enhanced by the addition of some stimulating ingredient, such as common salt, brandy, cayenne pepper, or mustard. It should be repeated two or three times a day.

Rhubarb is a good deal employed in the treatment of this disease. It seems however to be better suited to those cases that are unaccompanied by vomiting. Given alone, in these cases, or conjoined with calcined Magnesia, it will be found very useful in arresting the diarrhoea.

Not the least important of the remedies for Cholera Infantum,



is flannel next the skin. This should never be neglected. It is particularly necessary that woolen stockings be worn. Simply by encasing the little patient in flannel, I have more than once seen the disease, which had before been very intractable, speedily assume a more favourable aspect.

But after all, the most effectual way of arresting the complaint is to send the patient into the country. Scarcely does the little sufferer breathe the pure & renovating air of the country before he becomes refreshed & invigorated. When we have so certain & expeditious a means of restoring the patient to health, we should be particularly cautious how we tamper with the disease, until it becomes so firmly fixed, as not to be eradicated. If therefore the ordinary remedies do not soon make a favourable impression on the disease, it will be advisable, in all cases, to send the patient into the

country. This simple expedient, after every other attempt to arrest its progress has proved abortive, & when the case is apparently hopeless, has repeatedly been crowned with complete success.

